# **Control and connection** components

The essential guide





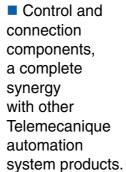


# A **compact**, **simple** and **advanced** offer for your small automation system equipment.

Welcome to the **Simply Smart**\* world, compliments of Telemecanique.

With complete synergy throughout, the various components constituting this offer provide you with simple automation system solutions that are based on control and input/output interfacing functions.

\*Simply Smart: more ingenuity and intelligence for continually improving ease of use.



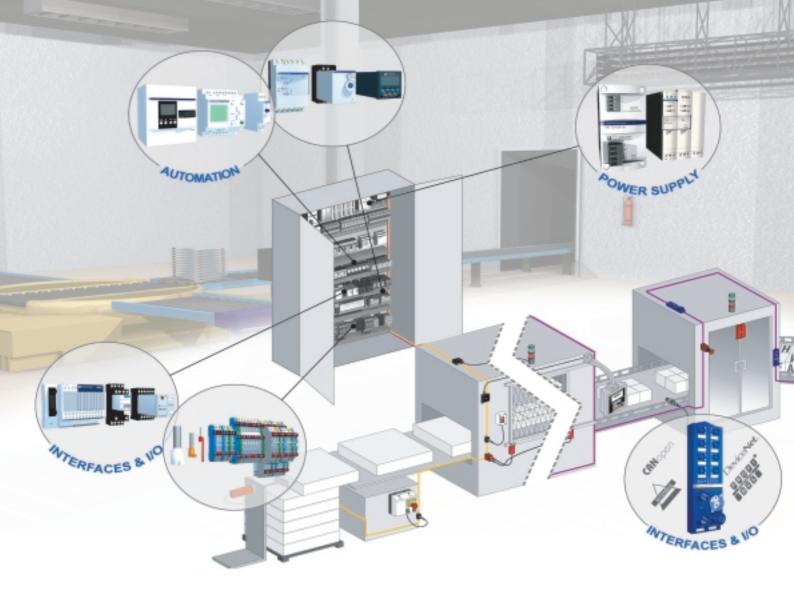


# Control and connection components The essential guide

A simplified selection guide enabling you to quickly select all the products required to build your small automation system equipment (simple installations & compact machines)

## Opt for an offer that is complete, economical and accessible to all

- Save time and improve reliability with products that are **simple** to select and to use (tailored ergonomics, simplified mounting and cabling, assembly without tools...).
- Save space with products that are always more **compact**, thus simplifying integration in your installations.
- Improve flexibility with a modular offer for easily resolving your changing needs (interchangeable functions and options, common accessories and options...).



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#### Zelio Control Relays Control relays for 3-phase supplies









Function	Rotational direction and presence of phases					
	+ Undervoltage + Over and undervoltage + Asymmetry					/
Adjustable time delay	without	without	0.110 s	0.110 s	fixed, 0.5 s	0.110 s
Supply voltage	200500 V	380500 V	400 V	380500 V	380500 V	380500 V
Output	2 C/O	2 C/O	2 C/O	2 C/O	1 C/O	2 C/O
References	RM4TG20	RM4TU02	RM4TR34 (1)	RM4TR32 (2)	RM4TA02	RM4TA32

<sup>(1)</sup> Relay with fixed voltage thresholds.

#### **Current and voltage measurement relays**

(3) Basic reference. To be completed with the letters indicating the required voltage, as shown below:

	<del>_</del>	
Voltage	V AC, 50/60 Hz	V DC
24240 V	MW	MW
110130 V	F	_
220240 V	M	_
380415 V	Q	_





Function	Detection of					
	over and undercurrent		over and undercurrent			
Measuring range	330 mA	0.31.5 A	0.050.5 V	110 V	30300 V	180270 V
	10100 mA	15 A	0.33 V	550 V	50500 V	
	0.11 A	315 A	0.55 V	10100 V		
Adjustable time delay	0.0530 s	0.0530 s	0.0530 s	0.0530 s	0.0530 s	0.110 s
Output	2 C/O	2 C/O	2 C/O	2 C/O	2 C/O	2 C/O
References	RM4JA31 (3)	RM4JA32•• (3)	RM4UA31 (3)	RM4UA32•• (3)	RM4UA33 (3)	RM4UB35

#### (4) Basic reference. To be completed with the letters indicating the required voltage, as shown below:

	RM4-LG01	RM4-LA32				
Voltage	V AC, 50/60 Hz	V AC, 50/60 Hz	V DC			
24 V	В	В	_			
24240 V	-	MW	MW			
110130 V	F	F	_			
220240 V	М	М	_			
380415 V	Q	O	_			

### Liquid level control relays





Control relays	Empty or fill	
Sensitivity scale	5 100 kΩ	0.25 5 kΩ 2.5 50 kΩ 25 500 kΩ
Time delay	without	adjustable, 0.1 to 10 s
Output	1 C/O	2 C/O
References	RM4LG01• (4)	RM4LA32•• (4)

Liquid level control probe type	•	1 simple stainless steel electrode in PVC protective casing
Mounting	suspended	suspended
Maximum operating temperature	100°C	100°C
References	LA9RM201	RM79696043

<sup>(2)</sup> Relay with adjustable voltage thresholds.

#### Zelio Count - Counters **Totalisers**











Display	Mechanical				LCD
Supply voltage	24 V DC			Battery	
Number of digits displayed	5	6	6	8	8
Counting frequency	20 Hz	10 Hz	25 Hz	25 Hz	7.5 kHz
Type of zero reset	Manual	Without	Manual	Without	Manual (1)
Front face dimensions, W x H	41.5 x 31 mm	30 x 20 mm	60 x 50 mm	60 x 50 mm	48 x 24 mm
References	XBKT50000U10M	XBKT60000U00M	XBKT60000U10M	XBKT80000U00M	XBKT81030U33E

<sup>(1)</sup> With electrical interlocking.

#### **Hour counters**







Display	Mechanical		LCD
Supply voltage	24 V AC	230 V AC	Battery
Number of digits / display	7 (99,999.99 h)	7 (99,999.99 h)	8 (999,999.99 h)
Supply frequency	50 Hz	50 Hz	Mode: 1/100 hour
Type of zero reset	Without	Without	Manual (1)
Front face dimensions, W x H	48 x 48 mm	48 x 48 mm	48 x 24 mm
References	XBKH70000004M	XBKH70000002M	XBKH81000033E

<sup>(1)</sup> With electrical interlocking.

#### **Multifunction counters**





Display			LCD		LED		
Number of digits displayed			6	6			
Counting freque	ency		5 kHz				
Type of reset			Manual, electric and automatic				
Front face dime	nsions, W x H		48 x 48 mm				
Preselection nu	mber		1	2	1	2	
References	Supply voltage	24 V DC	XBKP61130G30E	XBKP61230G30E	XBKP62130G30E	XBKP62230G30E	
		115 V AC	XBKP61130G31E	XBKP61230G31E	-	-	
		230 V AC	XBKP61130G32E	XBKP61230G32E	XBKP62130G32E	XBKP62230G32E	

#### **Automation**

### Zelio Time - Timing relays Industrial timers





Type of single function relay width 22.5 mm, relay output	On-delay		Off-delay		
External control	no	yes	no	yes	yes
Supply voltage	24 V AC/DC	24 V AC/DC	24240 V AC/DC	24 V AC/DC	24 V AC/DC
	110240 V AC	4248 V AC/DC		4248 V AC/DC	4248 V AC/DC
		110240 V AC		110240 V AC	110240 V AC
Timing range	0.05 s300 h	0.05 s300 h	0.05 s10 mn	0.05 s300 h	0.05 s300 h
Output	1 C/O	2 C/O (1)	1 C/O	2 C/O (1)	1 C/O
References	RE7TL11BU	RE7TP13BU	RE7RB11MW	RE7RL13BU	RE7RM11BU

<sup>(1) 1</sup> selectable in instantaneous mode.





Type of single function relay width 22.5 mm, relay output	Asymmetrical flashing	Pulse on energisation
External control	yes	no
Supply voltage	24 V AC/DC	24 V AC/DC
	4248 V AC/DC	110240 V AC
	110240 V AC	
Timing range	0.05 s300 h	0.05 s300 h
Output	1 C/O	1 C/O
References	RE7CV11BU	RE7PE11BU





Type of multifunction relay	6 functions (2)	8 functions (3)
Supply voltage	24 V AC/DC	24 V AC/DC
	4248 V AC/DC	110240 V AC
	110240 V AC	
Timing range	0.05 s300 h	0.05 s300 h
Output	1 C/O	2 C/O (1 selectable in instantaneous mode)
References	RE7ML11BU	RE7MY13BU

<sup>(2)</sup> RE7ML11BU functions: On-delay, Off-delay, Pulse on energisation with start on energisation, Pulse on energisation with start on opening of remote control contact, Flashing with start during the OFF period, Flashing with start during the ON period.

<sup>(3)</sup> REMY13BU functions: On-delay, Off-delay, Pulse on energisation with start on energisation, Pulse on energisation with start on opening of remote control contact, Flashing with start during the OFF period, Flashing with start during the ON period, Star-delta starting with double On-delay timing, Star-delta starting with contact for switching to star connection.

#### **Modular timers**





Type of modular timer width 17.5 mm, relay output	On-delay	Multifunction (1)		
External control	no	_	-	
Supply voltage	24 V DC - 24240 V AC	24 V DC - 24240 V AC	12 240V AC/DC	
Timing range	0.1 s100 h	0.1 s100 h	0.1 s100 h	
Output	1 C/O	1 C/O	1 C/O	
References	RE88826115	RE88826105	RE88826103	

<sup>(1)</sup> Multifunction: On-delay, Off-delay, Totaliser, Symmetrical flashing, Chronometer, Pulse on energisation.





Type of modular timer width 17.5 mm, relay output		Pulse on energisation	Off delay	Chronometer
External control	-	_	-	-
Supply voltage	24 V DC - 24240 V AC	24 V DC - 24240 V AC	24 V DC - 24240 V AC	24 V DC - 24240 V AC
Timing range	0.1 s100 h	0.1 s100 h	0.1 s100 h	0.1 s100 h
Output	1 C/O	1 C/O	1 C/O	1 C/O
References	RE88826155	RE88826145	RE88826135	RE88826125





Type of modular timer width 17.5 mm, solid-state output	On-delay	Multifunction (1)
Supply voltage	24240 V AC/DC	24240 V AC
Timing range	0.1 s100 h	0.1 s100 h
Output	solid-state	solid-state
References	RE88826014	RE88826004

<sup>(1)</sup> Multifunction: On-delay, Off-delay, Totaliser, Symmetrical flashing, Chronometer, Pulse on energisation.

### Zelio Logic Smart relays Zelio Logic Compact SR2





Compact smart relays		With display, d.c. power supply					
Supply voltage		12 V DC 24 V DC		24 V DC			
Number of inputs/outputs	uts/outputs 12 20 10 12 20		20	20			
Number of inputs	discrete inputs	8	12	6	8	12	12
	of which 0-10 V analogue inputs	4	6	_	4	2	6
Number of outputs		4 relay	8 relay	4 relay	4	8 relay	8
Dimensions, W x D x H (mm)		71.2x59.5x107.6	124.6x59.5x107.6	71.2x59.5x107.6		124.6x59.5x107.6	
Clock		yes	yes	no	yes	no	yes
References		SR2B121JD	SR2B201JD	<b>SR2A101BD</b> (1)	SR2B12•BD (2)	SR2A201BD (1)	SR2B20eBD (2)

<sup>(1)</sup> Programming on smart relay in LADDER language only

<sup>(2)</sup> Replace ● by the number «1» to order a smart relay with relay outputs and by «2» for a smart relay with transistor outputs (Example: SR2B121BD)





Compact smart relays	With display, a.c. power supply					
Supply voltage	24 V AC 100/240 VAC					
Number of inputs/outputs	12	20	10	12	20	20
Number of discrete inputs	8	12	6	8	12	12
Number of outputs	4 relay	8 relay	4 relay	4 relay	8 relay	8 relay
Dimensions, W x D x H (mm)	71.2x59.5x107.6	124.6x59.5x107.6	71.2x59.5x107.6		124.6x59.5x107.6	
Clock	yes	yes	no	no	no	no
References	SR2B121B	SR2B201B	SR2A101FU (1)	SR2B121FU	SR2A201FU (1)	SR2B201FU

<sup>(1)</sup> Programming on smart relay in LADDER language only





Compact smart relays		Without display and without buttons					
Supply voltage		24 V DC			100/240 V AC		
Number of inputs/outputs		10	12	20	10	12	20
Number of inputs	discrete inputs	6	8	12	6	8	12
	of which 0-10 V analogue inputs	-	4	6	-	-	_
Number of outputs		4 relay	4 relay	8 relay	4 relay	4 relay	8 relay
Dimensions, W x D x H (mm)		71.2x59.5x107.6		124.6x59.5x107.6	71.2x59.5x107.6		124.6x59.5x107.6
Clock		no	yes	yes	no	yes	yes
References		SR2D101BD (1)	SR2E121BD (3)	SR2E201BD (3)	SR2D101FU (1)	SR2E121FU	SR2E201FU

<sup>(1)</sup> Programming on smart relay in LADDER language only

<sup>(3)</sup> For version with 24 VAC supply (0 analogue inputs), delete the letter D from the end of the reference (SR2E121B and SR2E201B)

#### Zelio Logic Modular SR3





Modular smart relays*		With display					
Supply voltage		24 V DC		24 V AC		100/240 VAC	
Number of inputs/outputs		10	26	10	26	10	26
Number of inputs	discrete inputs	6	16	6	16	6	16
	of which 0-10 V analogue inputs	4	6	-	_	-	_
Number of outputs		4	10	4 relay	10 relay	4 relay	10 relay
Dimensions, W x D x H (mm)		71.2x59.5x107.6	124.6x59.5x107.6	71.2x59.5x107.6	124.6x59.5x107.6	71.2x59.5x107.6	124.6x59.5x107.6
Clock		yes	yes	yes	yes	yes	yes
References		SR3B10eBD (1)	SR3B26eBD (1)	SR3B101B	SR3B261B	SR3B101FU	SR3B261FU

<sup>\*</sup> Each modular base can be fitted with one communication module and one I/O expansion module.

Available 2st quarter 2004

Available 2nd quarter 2004







Expansion modules	(2)	Inputs / Outpus	Inputs / Outpus		
Usage		For modular smart re	For modular smart relays SR3B		
Number of inputs/output	s	6	6 10 14		
Number of discrete input	ts	4	6	8	-
Number of outputs		2 relay	4 relay	6 relay	-
Dimensions, W x D x H (r	nm)	35.5x59.5x107.6	72x59.5x107.6	72x59.5x107.6	35.5x59.5x107.6
References	24 V DC	SR3XT61BD	SR3XT101BD	SR3XT141BD	SR3MBU01BD
	24 VAC	SR3XT61B	SR3XT101B	SR3XT141B	-
	100240 VAC	SR3XT61FU	SR3XT101FU	SR3XT141FU	-

<sup>(2)</sup> The power supply of the expansion modules is provided via the Zelio Logic modular relays

#### Zelio Soft software and back-up memory

Software and back-up memory	Multilingual programmming software	Back-up memory
Description	PC CD-ROM (Windows 95/98, NT, 2000, XP, ME) (3)	EEPROM
References	SR2SFT01	SR2MEM01
PC/Smart relay connecting cable	SR2CBL01	-
Interface for USB port	SR2CBL06	-

<sup>(3)</sup> CD-Rom containing «Zelio Soft» software, an application library, a self-training manual, installation instructions and a user's manual.

#### **Communication interface**

Interface and software	Communication interface	Programming software
Supply voltage	12/24 V DC	-
Description	-	PC CD ROM (Windows 95/98, NT, 2000, XP, ME)
Dimensions, W x D x H (mm)	72x59.5x107.6	-
References	SR2COM01 🛕	SR2SFT03

<sup>(1)</sup> Replace ● by the number «1» to order a smart relay with relay outputs and by «2» for a smart relay with transistor outputs (Example: SR3B101BD)

### **Automation**

## Twido programmable controller **Bases**







Type of base	Compact					
Supply voltage	100240 V AC					
Number of discrete inputs/outputs	10	16	24			
Number of discrete inputs (24 V DC)	6 sink/source	9 sink/source	14 sink/source			
Number of discrete outputs	4 relay, 2 A	7 relay, 2 A	10 relay, 2 A			
Type of connection	Screw terminal block, non remov	Screw terminal block, non removable				
Number of I/O expansion modules possible	-	_	4			
Counting	3 x 5 kHz, 1 x 20 kHz	3 x 5 kHz, 1 x 20 kHz				
Serial ports	1 x RS 485	1 x RS 485; optional: 1 x RS 2320	C or RS485			
Protocols	Modbus Master/Slave, ASCII, rei	Modbus Master/Slave, ASCII, remote I/Os				
Dimensions, W x D x H	80 x 70 x 90 mm	80 x 70 x 90 mm	95 x 70 x 90 mm			
References	TWDLCAA10DRF	TWDLCAA16DRF	TWDLCAA24DRF			
Clock (optional)	TWDXCPRTC					
Display (optional)	TWDXCPODC					







Type of base	Modular			
Number of discrete inputs/outputs	20	20		
Number of discrete inputs (24 V DC) (1)	12 sink/source	12 sink/source	24 sink/source	
Number of discrete outputs	8 transistor, source 0.3 A	6 relay and 2 transistor, source 0.3 A	16 transistor, source 0.3 A	
Type of connection	HE 10 connector	Removable screw terminal block	HE 10 connector	
Number of I/O expansion modules possible	4	7	7	
Supply voltage	24 V DC			
Integrated counting and positioning	Counting: 2 x 5 kHz, 2 x 20 kHz; Positioning: PLS / PWM 2 x 7 kHz			
Serial ports	1 x RS 485; optional: 1 x RS 232C or RS485			
Protocols	Modbus Master/Slave, ASCII, remote I/Os			
Dimensions, W x D x H	35.4 x 70 x 90 mm	47.5 x 70 x 90 mm	47.5 x 70 x 90 mm	
References	TWDLMDA20DTK (1)	TWDLMDA20DRT	TWDLMDA40DTK (1)	
Clock (optional)	TWDXCPRTC			
Display (optional)	TWDXCPODM			
Memory expansion (optional)	-	TWDXCPMFK64		

<sup>(1)</sup> Also available: SINK transistor output versions (TWDLMDA20DUK and TWDLMDA40DUK).

#### **Accessories**

Pre-wired system for mod HE 10 connector	dules with	For Modular Bases TWDLMDA20DTK/40DTK		For Outputs TWDDO16TK/32TK
TwidoFast "bared" cable	L = 3 m	TWDFCW30M	TWDFCW30K	TWDFCW30K
	L = 5 m	TWDFCW50M	TWDFCW50K	TWDFCW50K
Telefast connection bases	L = 1 m	TWDFST20DR10	TWDFST16D10	TWDFST16DR10
	L = 2 m	TWDFST20DR20	TWDFST16D20	TWDFST16DR20

Memory Cartridge and Software	Memory cartridge	TwidoSoft software
Description	Application update	with cable
References	TWDXCPMFK32	TWDSPU1001V10M

### Input/output modules







Type of module		Analogue				AS-Interface master
Number of inputs/outputs		2 inputs	1 output	2 inputs / 1 output		2 modules max.,
						62 discrete modules max.
						7 analogue modules max
Protocol/profile		-				AS-Interface/M3, V 2.11
Connection		Removable screw te	Removable screw terminal block			
Inputs	Range	010 V (1)	_	010 V (1)	Thermocouple type K, J, T	_
		420 mA (2)		420 mA (2)	Pt 100 3-wire temperature probe	
	Resolution	12 bits (4096 points)	-	12 bits (4096 points)		-
outputs	Range	-	010 V			_
			420 mA			
	Resolution	-	12 bits (4096 points)			-
Measuring precison		0.2 % PE				
Supply voltage		24 V DC				
Dimensions, WxDxH		23,5 x 70 x 90				23,5 x 70 x 90
References		TWDAMI2HT	TWDAMO1HT	TWDAMM3HT	TWDALM3LT	TWDNOI10M3
		•				

<sup>(1) (</sup>non differential)









Type of module		Discrete				
Number of Discrete inputs	/outputs	8	4 Inputs / 4 Outputs	16	16	32
Connection		Removable screw terminal block			HE 10 connectors	
References	Inputs 24 V DC (1)	TWDDDI8DT	TWDDMM8DRT	TWDDDI16DT	TWDDDI16DK	TWDDDI32DK
	Relay outputs 2 A	TWDDRA8RT	TWDDMM8DRT	TWDDRA16RT	_	_
	Transistor outputs, source 0.1 A	TWDDDO8TT (2)	-	_	TWDDDO16TK (2)	TWDDDO32TK (2)

<sup>(1)</sup> All inputs are sink/source.

#### **Communication modules**







Type of module	Serial interfa	Serial interface module		Serial interface adaptor		
Communication type (non isolated)	RS 232C	RS 232C RS 485		RS 232C	RS 485	
Connection	Mini-DIN connec	lini-DIN connector Screw terminals		Mini-DIN connector		Screw terminals
Protocol	Modbus Master/	Slave, ASCII, rem	ote I/Os			
Twido base compatibility	Modular base T	WD LMDA		Compact base T	WD LCAA 16/24 [	ORF
		Modular base via built-in display module TWDXCPC			lule TWDXCPODM	
References	TWDNOZ232D	TWDNOZ485D	TWDNOZ485T	TWDNAC232D	TWDNAC485D	TWDNAC485T

<sup>(2) (</sup>differential)

<sup>(2)</sup> Also available: SINK transistor output versions (TWDDDO8UT, TWDDDO16UK and TWDDDO32UK).

#### Interfaces & I/O\_\_\_\_

### Terminal blocks Insulation displacement technology







•		2-way terminal blocks (sold in lots of 100)	End covers (sold in lots of 10)	2-pole commoning link (1) (sold in lots of 10)
1 mm <sup>2</sup> c.s.a.	Conducting	AB1AA135U2GR	AB1AAAC122GR	AB1RRAL22
	Protective earth conductor	AB1AATP135U2	AB1AAAC122VE	-
2.5 mm <sup>2</sup> c.s.a.	Conducting	AB1AA235U2GR	AB1AAAC122GR	AB1RRAL22
	Protective earth conductor	AB1AATP235U2	AB1AAAC122VE	-

<sup>(1)</sup> For a 3, 4, 5 or 10-pole commoning link replace the last number of the reference (2) by 3, 4, 5 or 10 respectively. (Example: AB1RAL22 becomes AB1RAL23).

#### Spring clamp technology







Clip-on mounting on 35 mm 프 귝 rails		Terminal blocks	End covers	2-pole commoning link (1)
		(sold in lots of 100)	(sold in lots of 10)	(sold in lots of 10)
2.5 mm <sup>2</sup> c.s.a.	Conducting	AB1RR235U2GR	AB1RRAC242GR	<b>AB1RRAL22</b> (1)
	Protective earth conductor	AB1RRTP235U2	AB1RRTPAC242	-
4 mm <sup>2</sup> c.s.a.	Conducting	AB1RR435U2GR	AB1RRAC242GR	AB1RRAL42 (1)
	Protective earth conductor	AB1RRTP435U2	AB1RRTPAC242	-
6 mm <sup>2</sup> c.s.a.	Conducting	AB1RR635U2GR	-	AB1RRAL62
	Protective earth conductor	AB1RRTP635U2	_	-
10 mm <sup>2</sup> c.s.a.	Conducting	AB1RR1035U2GR (2)	_	AB1RRAL102
	Protective earth conductor	AB1RRTP1035U2 (2)	_	_
16 mm <sup>2</sup> c.s.a.	Conducting	AB1RR1635U2GR (2)	-	AB1RRAL162
	Protective earth conductor	AB1RRTP1635U2 (2)	-	-

<sup>(1)</sup> For a 3, 4, 5 or 10-pole commoning link replace the last number of the reference (2) by 3, 4, 5 or 10 respectively. (Example: AB1RRAL22 becomes AB1RRAL23).

#### **Screw clamp technology**







Clip-on mounting o	n 35mm ப പ ட rails	Terminal blocks (sold in lots of 100)	End covers (sold in lots of 50)	2-pole commoning link (1) (sold in lots of 10)
2.5 mm <sup>2</sup> c.s.a.	Conducting	AB1VV235U	AB1AC24	AB1ALN22 (1)
	Protective earth conductor	-	_	-
4 mm <sup>2</sup> c.s.a.	Conducting	AB1VV435U	AB1AC24	AB1ALN42 (1)
	Protective earth conductor	AB1TP435U	_	-
6 mm <sup>2</sup> c.s.a.	Conducting	AB1VV635U	AB1AC6	AB1ALN62 (1)
	Protective earth conductor	AB1TP635U	_	-
10 mm <sup>2</sup> c.s.a.	Conducting	AB1VVN1035U (2)	AB1ACN10	AB1ALN102 (1)
	Protective earth conductor	AB1TP1035U (2)	_	-
16 mm <sup>2</sup> c.s.a.	Conducting	AB1VVN1635U (2)	AB1ACN16	AB1ALN162 (1)
	Protective earth conductor	AB1TP1635U (2)	-	-

<sup>(1)</sup> For a 3, 4, 5 or 10-pole commoning link replace the last number of the reference (2) by 3, 4, 5 or 10 respectively. (Example: AB1ALN22 becomes AB1ALN23).

<sup>(2)</sup> Sold in lots of 50.

<sup>(2)</sup> Sold in lots of 50.

### Insulated cable ends Conforming to DIN 46228 (1)

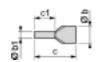
mm²	Øb	Øb1	С	
0.5	3	1.4	13	
0.75	3.1	1.6	13	
1	3.4	1.8	13.5	
1.5	4	2.1	13.5	
2.5	4.6	2.7	14.5	





			Single cable ends Sold in lots of 10 x 100				
Packaging			Individual or "strings" of bags	Dispenser pack	Strips of 50 in bag		
Conductor c.s.a.	0.5	White	DZ5CE005D	AZ5CE005D	DZ5CEB005D		
in mm²	0.75	Grey	DZ5CE007D	AZ5CE007D	DZ5CEB007D		
	1	Red	DZ5CE010D	AZ5CE010D	DZ5CEB010D		
	1.5	Black	DZ5CE015D	AZ5CE015D	DZ5CEB015D		
	2.5	Blue	DZ5CE025D	AZ5CE025D	DZ5CEB025D		

	mm²	Øb	Øb1	С	с1
	0.75	2.8 x 5	1.8	15	8
ſ	1	3.4 x 5.4	2.05	15	8
ſ	1.5	3.6 x 6.6	2.3	15	8
Ī	2.5	4.2 x 7.8	2.9	18.5	10

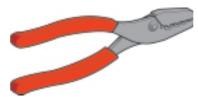




Туре			<b>Double cable ends</b> Sold in lots of 5 x 100
Packaging			Dispenser pack
Conductor c.s.a.	2 x 0.75	Grey	AZ5DE007D
in mm²	2 x 1	Red	AZ5DE010D
	2 x 1.5	Black	AZ5DE015D
	2 x 2.5	Blue	AZ5DE025D

(1) For insulated cable ends conforming to standard NF C 63-023, please refer to your Schneider Electric agency.

#### **Cabling accessories**



Туре	Pliers/cutters					
Functions	Stripping	Cutting/stripping	Crimping	Crimping (ratchet)	Cutting/stripping/crimping (2)	
For cable c.s.a.	0.08 to 4 mm <sup>2</sup>	0.4 to 4 mm <sup>2</sup>	0.5 to 16 mm <sup>2</sup>	0.25 to 6 mm <sup>2</sup>	0.5 to 2.5 mm <sup>2</sup>	
References	AT1PA7	AT2PE1	AT1PA2	AT2PA5	AT2TRIF01	

(2) For use with cable ends packed in strips of 50.

### Interfaces & I/O \_\_\_\_ Zelio Relay - Plug-in relays **Interface relays**



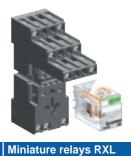
Type of relay		Interface relays RSE	3				
Contact characteristics							
Thermal current Ith in A (temperature ≤	40°C)	8	12	16			
Number of contacts		2 C/O	1 C/O	1 C/O			
Contact material		AgNi	AgNi	AgNi			
Switching voltage, min. / max.		5 / 250 V AC/DC	5 / 250 V AC/DC	5 / 250 V AC/DC			
Breaking capacity, min. / max.		5 mA / 2000 VA	5 mA / 3000 VA	5 mA / 4000 VA			
Coil characteristics							
Average consumption, inrush, VA / W		0.75 VA / 0.45 W					
Permissible voltage variation		0.81.1 Un (50 / 60Hz o	0.81.1 Un (50 / 60Hz or =)				
References		(1)	(1)	(1)			
Coil supply voltage	6 V DC	RSB2A080RD	RSB1A120RD	RSB1A160RD			
on DC	12 V DC	RSB2A080JD	RSB1A120JD	RSB1A160JD			
	24 V DC	RSB2A080BD	RSB1A120BD	RSB1A160BD			
	48 V DC	RSB2A080ED	RSB1A120ED	RSB1A160ED			
	60 V DC	RSB2A080ND	RSB1A120ND	RSB1A160ND			
	110 V DC	RSB2A080FD	RSB1A120FD	RSB1A160FD			
Coil supply voltage	24 V AC	RSB2A080B7	RSB1A120B7	RSB1A160B7			
on AC	48 V AC	RSB2A080E7	RSB1A120E7	RSB1A160E7			
	110 V AC	-	_	-			
	120 V AC	RSB2A080F7	RSB1A120F7	RSB1A160F7			
	220 V AC	RSB2A080M7	RSB1A120M7	RSB1A160M7			
	230 V AC	RSB2A080P7	RSB1A120P7	RSB1A160P7			
	240 V AC	RSB2A080U7	RSB1A120U7	RSB1A160U7			

<sup>(1)</sup> References for relays without socket. For relays with socket, add the letter S to the end of the selected reference. (Example: RSB2A080B7 becomes RSB2A080B7S).

#### **Sockets for relays**

Type of socket	For interface relays RSB				
Mixed input/output type sockets					
without location for protection module	-	_	_		
with location for protection module	-	_	_		
Separate input/output type sockets					
with location for protection module	RSZE1S48M	RSZE1S38M	RSZE1S48M		
Protection modules					
Diode, 6230 V DC	RZM040W				
Diode + LED, 624 V DC	RZM031RB				
Diode + LED, 2460 V DC	RZM031BN				
Diode + LED, 110230 V DC	RZM031FPD				
Varistor + LED, 624 V DC or AC	RZM021RB				
Varistor + LED, 2460 V DC or AC	RZM021BN				
Varistor + LED, 110230 V DC or AC	RZM021FP				
RC circuit, 2460 V AC	RZM041BN7				
RC circuit, 110240 V AC	RZM041FU7				
"Power on" indication, 110/230 V AC	_				
"Power on" indication, 6/24 V DC with protection diode	_				
Varistor, 24 V AC	-				
Varistor, 230 V AC	_				
Multifunction timer module, 24230 V DC or AC	-				
Accessories					
Plastic extractor	RSZR215				
Maintaining spring clamp	_				
Legend for sockets	RSZL300				

### Miniature and universal relays





					indicator		
	12	10	6	6	10	10	4
	2 C/O	3 C/O	4 C/O	4 C/O	2 C/O	3 C/O	3 C/O
	AgNi	AgNi	AgNi	AgNi/AU 5 u	AgNi	AgNi	AgNi/AU 10 u
	5 / 250 V AC/DC	5 / 250 V AC/DC	5 / 250 V AC/DC	5 / 250 V AC/DC	20 / 250 V AC/DC	20 / 250 V AC/DC	10 / 250 V AC, 125 V DC
	5 mA / 3000 VA	5 mA / 2500 VA	5 mA / 1500 VA	2 mA / 1500 VA	50 mA / 3000 VA	50 mA / 3000 VA	1 mA / 1000 VA
	1.6 VA / 0.9 W				2.3 VA / 1.5 W		
	0.81.1 Un (50 / 60Hz	or =)			0.81.1 Un (50Hz or =)	, 0.851.1Un (60Hz)	
	(2)	(2)	(2)	(2)	(2)	(2)	_
	-	-	-	-	-	-	-
	RXL2A12B1JD	RXL3A10B1JD	RXL4A06B1JD	RXL4G06B1JD	RUN21D21JD	RUN31A21JD	-
	RXL2A12B1BD	RXL3A10B1BD	RXL4A06B1BD	RXL4G06B1BD	RUN21D21BD	RUN31A21BD	RUN33A22BD
	RXL2A12B1ED	RXL3A10B1ED	RXL4A06B1ED	RXL4G06B1ED	RUN21D21ED	RUN31A21ED	RUN33A22ED
Ì	-	-	-	_	-	-	-
Ì	RXL2A12B1FD	RXL3A10B1FD	RXL4A06B1FD	RXL4G06B1FD	RUN21D21FD	RUN31A21FD	-
	RXL2A12B1B7	RXL3A10B1B7	RXL4A06B1B7	RXL4G06B1B7	RUN21D21B7	RUN31A21B7	RUN33A22B7
	RXL2A12B1E7	RXL3A10B1E7	RXL4A06B1E7	RXL4G06B1E7	RUN21D21E7	RUN31A21E7	RUN33A22E7
	-	-	-	-	RUN21D21F7	RUN31A21F7	RUN33A22E7
	RXL2A12B1F7	RXL3A102B1F7	RXL4A062B1F7	RXL4G062B1F7	-	-	-
	-	-	-	-	-	-	-
	RXL2A12B1P7	RXL3A10B1P7	RXL4A06B1P7	RXL4G06B1P7	RUN21D21P7	RUN31A21P7	RUN33A22P7

<sup>(2)</sup> References for relays without status LED indicator. For relays with status LED indicator, replace the last number 1 in the reference by 2. (Example: RXL2A12B1JD becomes RXL2A12B2JD)

For miniature re	lays RXL		For universal	relays RUN with cor	ntact position mech. indicato				
RXZE1M114 (3)	_	RXZE1M114	RXZE1M114	RUZ1D	RUZ1A	RUZ1A			
RXZE1M114M	-	RXZE1M114M	RXZE1M114M	RUZ7D	RUZ7A	RUZ7A			
RXZE1S108M	RXZE1S111M	RXZE1S114M	RXZE1S114M	-					
RZM040W				RUW040BD					
RZM031RB				-					
RZM031BN				-					
RZM031FPD				-	-				
RZM021RB				-					
RZM021BN				-					
RZM021FP				-					
RZM041BN7				-					
RZM041FU7				RUW041P7					
-				RUW010P7					
_				RUW030BD					
-				RUW042B7					
-				RUW042P7					
-				RUW101MW					
RXZR235				-					
RXZ200				RUZ200					
RXZL320				-					
(3) Limited to 7 A in or	peration.								

# Interfaces & I/O \_\_\_\_ Telefast 2 pre-wired system Passive I/O sub-bases «Discrete»





Type of connection sub-b	pase	Optimum						
Number of channels		16	16	16				
Max. current per channel		0.5 A	0.5 A					
Control voltage / output voltag	e	24 V DC / 24 V DC	24 V DC / 24 V DC					
LED per channel		-	With					
Number of terminals per chann	nel/on row number	1/2	1/1	2/2	3/3			
Dimensions, W x D x H		55 x 59 x 67 mm	106 x 60 x 49 mm					
References		-	ABE7H16C11	ABE7H16C21	ABE7H16C31			
	Cable L = 1 m	ABE7H20E100 (1)	-	-	-			
Cable L = 2 m		ABE7H20E200 (1)	-	-	-			
Cable L = 3 m		ABE7H20E300 (1)	-	-	-			
Connection cable recommended	for Modicon, TSX Micro and Premium	PLCs, L = 1 m (2)	ABFH20H100					

<sup>(1)</sup> Connection cable supplied for PLCs.

<sup>(2)</sup> For a 2 m length cable, replace the number 1 in the reference by 2, and for a 3 m length, by 3. (Example: ABFH20H100 becomes ABFH20H200).



Type of connection sub-base	Universal					
Number of channels	16					
Max. current per channel	0.5 A					
Control voltage / output voltage	24 V DC / 24 V I	24 V DC / 24 V DC				
LED per channel	-	With	-	_	With	With
Number of terminals per channel/on row number	1/1	1/1	1/2	2/2	2/2	3/3
Dimensions, W x D x H	125 x 58 x 70 m	m	84 x 58 x 70 mm	125 x 58 x 70 m	m	
References	ABE7H16R10	ABE7H16R11	ABE7H16R50	ABE7H16R20	ABE7H16R21	ABE7H16R31
Connection cable recommended for Modicon, TSX Micro and Pre	mium PLCs, L = 1 m: Al	BFH20H100 (2)				

<sup>(2)</sup> For a 2 m length cable, replace the number 1 in the reference by 2, and for a 3 m length, by 3. (Example: ABFH20H100 becomes ABFH20H200).



Type of connection sub-base			For counter and analogue channels	Passive distribution with shielding continuity	Distribution and supply of analogue channels		
Number of channels			1 counter channel (3)	8	8		
Max. current per channel			25 mA	25 mA 25 mA 25 mA			
Control voltage / output voltage			24 V DC / 24 V DC				
Number of terminals per channel			2	2 or 4	2 or 4		
Dimensions, W x D x H			143 x 58 x 70 mm	125 x 58 x 70 mm	125 x 58 x 70 mm		
References			ABE7CPA01	ABE7CPA02	ABE7CPA03		
Connection cable recommended	TSX Micro	L = 2.5 m	TSXCCPS15	_	-		
for Modicon PLCs (4)	Premium	L = 3 m	TSXCAP030				

<sup>(3)</sup> Or 8 inputs + 2 outputs, analogue.

<sup>(4)</sup> Connection cables available for other PLCs, please refer to your Schneider Electric agency.

#### Sockets with plug-in relays and terminals



Type of connection sub-base			With soldered solid-state relay outputs		With soldered electro- mechanical relay outpu		
Number of channels	16		16		16		
Max. current per channel	12 mA	12 mA			2 A	5 A	
Input voltage / output voltage	24 V DC / - 110 V AC / -		- / 24 V DC		- / 530 V DC, 230 V AC		
Number of contacts	_		_		1 N/O		
Polarity distribution	-		-		(1)	Volt-free	
Number of terminals per channel	2						
Dimensions, W x D x H	206 x 58 x 77 mm						
References	ABE7S16E2B1   ABE7S16E2F0   ABE7S16S2B0(2)   ABE7S16S1B2   ABE7R16S111   ABE7R16S2					ABE7R16S210	
Connection cable recommended for Modicon, TSX Micro and Premium PLCs, L = 1 m: ABFH20H100 (3)							

- (1) Contact common per group of 8 channels.
- (2) With fault detection signal (can only be used with modules with protected outputs).
- (3) For a 2 m length cable, replace the number 1 in the reference by 2, and for a 3 m length, by 3. (Example: ABFH20H100 becomes ABFH20H200).



Type of connection sub-base	With plug-in electromechanical relays						
Number of channels	16						
Max. current per channel	5 A	2.5 A			4 A	5 A	
Control voltage / output voltage	24 V DC / 524 V DC, 230 V AC						
Number of contacts	1 N/O			1 C/O		2 C/O	
Polarity distribution	(4)	(5)	Volt-free				
Number of terminals per channel	2	2 or 3			2 to 6		
Dimensions, W x D x H	110x54x89 mm 211 x 64 x 89 mm 272 x 74 x 89 mm				m		
References	ABE7R16T111	ABE7R16T212	ABE7R16T210	ABE7R16T230	ABE7R16T330	ABE7R16T370	
Connection cable recommended for Modicon, TSX Micro and Premium PLCs, L = 1 m: ABFH20H100 (6)							

- (4) Contact common per group of 4 channels.
- (5) Common on both poles.
- (6) For a 2 m length cable, replace the number 1 in the reference by 2, and for a 3 m length, by 3. (Example: ABFH20H100 becomes ABFH20H200).

#### Connection cables for PLCs (7)





Input/Output functi	ons	Discrete	Analogue	Analogue and counter	Counter	Axis control
References	Cable L = 1 m	ABFH20H100	-	-	-	-
	Cable L = 2 m	ABFH20H200	ABFY25S200	-	-	TSXCXP213
	Cable L = 2.5 m	-	-	TSXCCPS15	TSXCCPH15	-
	Cable L = 3 m	ABFH20H300	TSXCAP030	-	-	-
	Cable L = 6 m	-	-	-	-	TSXCXP613

(7) Modicon, TSX Micro and Premium PLCs.

For other connection cables and accessories, please refer to your Schneider Electric agency.

# Interfaces & I/O Passive splitter boxes IP67, Telefast ABE9





Type of connection			To PLC using multicore cable	
Number of channels			4	8
Type of female connector			M12, 5-pin	M12, 5-pin
Max. number of signals			8	16
Max. current per channel			4 A	
Max. current per splitter box			16 A (1 mm²)	
Product certification			cULus	
Dimensions, W x D x H			50.2 x 42 x 92.2 mm	50.2 x 42 x 149.2 mm
References	Without LEDs	Cable L = 5 m	ABE9C1240L05	ABE9C1280L05
		Cable L = 10 m	ABE9C1240L10	ABE9C1280L10
	With LEDs (1)	Cable L = 5 m	ABE9C1241L05	ABE9C1281L05
		Cable L = 10 m	ABE9C1241L10	ABE9C1281L10

<sup>(1)</sup> Green LED: power supply status, yellow LED: channel status.





Type of connection		To PLC using M23 connecto	To PLC using M23 connector		
Number of channels		4	8		
Type of female connector		M12, 5-pin	M12, 5-pin		
Max. number of signals		8	16		
Max. current per channel		4 A	4 A		
Max. current per splitter bo	ox	16 A			
Product certification		cULus			
Dimensions, W X D x H		50.2 x 36.5 x 92.2 mm	50.2 x 36.5 x 149.2 mm		
References	Without LEDs	ABE9C1240C23	ABE9C1280C23		
	With LEDs (1)	ABE9C1241C23	ABE9C1281C23		

<sup>(1)</sup> Green LED: power supply status, yellow LED: channel status.

#### **Accessories**





· · · · · · · · · · · · · · · · · · ·		Splitter boxes w/o cable		Terminal connectors		Sealing plugs
		Without LEDs	With LEDs	Cable L = 5 m	Cable L = 10 m	(sold in lots of 10)
References	4-channel	ABE9C1240M	ABE9C1241M	ABE9XCA1405	ABE9XCA1410	-
	8-channel	ABE9C1280M	ABE9C1281M	ABE9XCA1805	ABE9XCA1810	-
	for Ø12 connector	-	_	-	-	FTXCM12B

## Cabling accessories M12 / M12 jumper cables



Туре			Male / Female jumper cables				
Type of male connector, i	interface side		M12, 3-pin, straight, screw thread M12, 4-pin, straight, screw thread M12, 5-pin, straight, screw				
Type of female connector	r, sensor side		M12, 3-pin, straight, screw thread	M12, 4-pin, straight, screw thread	M12, 5-pin, straight, screw thread		
Cable			PUR, black	PUR, black	PUR, black		
References	Cable L = 1 m		XZCR1511040A1	XZCR1511041C1	XZCR1511064D1		
		L = 2 m	XZCR1511040A2	XZCR1511041C2	XZCR1511064D2		

#### M12 / M8 or DIN jumper cables



Туре			Male / Female jump	Male / Female jumper cables			
7		M8, 3-pin	M12, 3-pin	M12, 3-pin	M12, 3-pin		
		straight, screw thread	straight, screw thread	straight, screw thread	straight, screw thread		
Type of female connector	Type of female connector, sensor side		M8, 3-pin	M8, 3-pin	M8, 3-pin	DIN 43650A	
			straight, screw thread	straight, clip together	straight, screw thread	elbowed, screw thread	
Cable			PUR, black	PUR, black	PUR, black	PUR, black	
References Cable		L = 1 m	XZCR2705037R1	XZCR1501040G1	XZCR1509040H1	XZCR1523062K1	
		L = 2 m	XZCR2705037R2	XZCR1501040G2	XZCR1509040H2	XZCR1523062K2	

#### Connectors, splitter box



Туре			Connectors		Pre-wired connectors	Splitter box	" <b>Y</b> "
Type of male connector, interface	ce side		M12, 4-pin	M8, 3-pin	M12, 5-pin, straight, screw thread	1 x M12	1 x M12
Type of female connector, sens	or side		_	_	+	2 x M12 2 x M8	
Cable			_	_	PUR, black	_	
References	Straight conn	Straight connector, screw thread		XZCC8MDM30V	+	FTXCY1212	FTXCY1208
	Elbowed conr	nector, screw thread	XZCC12MCM40B	-	-	-	-
	Cable	L = 0.5 m	-	_	XZCP1564L05	_	_
		L = 2 m	-	-	XZCP1564L2	-	-

### Interfaces & I/O\_\_\_\_

# Splitter boxes for fieldbus Plastic enclosure, IP67, Advantys FTB

Available 4th Q. 2003









Type of bus		CANopen	DeviceNet	ProfiBus	InterBus		
Number of channels		8					
Type of female conne	ector	M12, 5-pin					
Max. voltage / curren	t of inputs	24 V DC / 200 mA					
Max. voltage / curren	t of outputs	24 V DC / 1.6 A					
Max. current per spli	tter box	8 A	8 A				
Product certification		cULus	cULus				
Dimensions, W X D x	Н	63 x 50.5 x 220 mm	63 x 50.5 x 220 mm 63 x 69 x 220 mm				
Diagnostics	Splitter boxes	By LED for: bus and I/0	By LED for: bus and I/O undervoltage + I/O short-circuit + I/O power supply				
	Channels	By LED for: I/O short-o	ircuit + wire breakage fau	lt + I/O fault			
References	16 inputs	FTB1CN16EP0	FTB1DN16EP0	FTB1DP16EP0	FTB1IB16EP0		
	8 inputs/8 outputs	FTB1CN08E08SP0	FTB1DN08E08SP0	FTB1DP08E08SP0	FTB1IB08E08SP0		
	12 inputs/4 outputs	FTB1CN12E04SP0	FTB1DN12E04SP0	FTB1DP12E04SP0	FTB1IB12E04SP0		
	16 configurable inputs/outputs	FTB1CN16CP0	FTB1DN16CP0	FTB1DP16CP0	FTB1IB16CP0		

#### Metal enclosure, IP67, Advantys FTB

Available 4th Q. 2003





Type of bus		DeviceNet ProfiBus			
Number of channels		8			
Type of female connector		M12, 5-pin			
Max. voltage / current of inp	outs	24 V DC / 200 mA			
Max. voltage / current of ou	tputs	24 V DC / 1.6 A			
Max. current per splitter bo	x	8 A			
Product certification		cULus			
Dimensions, W x D x H		62.7 x 38.9 x 224.7 mm			
Diagnostics	Splitter boxes	By LED for: bus and I/O undervoltage + I/O short-circuit + I/O power supply			
	Channels	By LED for: I/O short-circuit + wire breakage fault + I	/O fault		
References	16 inputs	FTB1DN16EM0	FTB1DP16EM0		
	8 inputs/8 outputs/configurable outputs	FTB1DN08E08CM0	FTB1DP08E08CM0		
	16 configurable inputs/outputs	FTB1DN16CM0	FTB1DP16CM0		

### Accessories for FTB splitter boxes (1)

#### **Bus connection cables**



(1) For sensor and actuator cabling accessories: see page 17

Type of bus			CANopen	DeviceNet	ProfiBus	InterBus
Type of female connector			M12, 5-pin, at either	M12, 5-pin, at either end		
Connector coding			A encoded		B encoded	_
References	Cable	L = 0.3  m	FTXCN3203		FTXDP3203	-
		L = 0.6 m	FTXCN3206		FTXDP3206	FTXIB1206 (2)
		L = 1 m	FTXCN3210		FTXDP3210	FTXIB1210 (2)
	Ī		FTXCN3220		FTXDP3220	FTXIB1220 (2)
		L = 3 m	FTXCN3230		FTXDP3230	-
		L = 5 m	FTXCN3250		FTXDP3250	FTXIB1250 (2)

(2) Reference includes the Bus connection cable + the power supply cable.

#### **Power supply connection cables**



Type of bus			CANopen	CANopen DeviceNet ProfiBus				
Type of female connector			Type 7/8, 5-pin, at either	end	· ·			
References	Cable	L = 0.6 m	FTXDP2206	FTXDP2206				
		L = 1 m	FTXDP2210					
		L = 2 m	FTXDP2220					
		L = 5 m	FTXDP2250					
Type of female connector	•		Type 7/8, 5-pin, at one e	nd (other end free)				
References	Cable	L = 1.5 m	FTXDP2115					
		L = 3 m	FTXDP2130					
		L = 5 m	FTXDP2150					

#### **Accessories**

Type of bus		CANopen	DeviceNet	ProfiBus	Interbus	
References	Configuration CD-ROM	FTXES00				
	Diagnostics M12 adaptor	FTXDG12				
	Power supply T-connector	FTXCNCT1			-	
	Line terminator	FTXCNTL12 FTXDPTL		FTXDPTL12	-	

### **Power supply**

# Phaseo power supplies and transformers Power supplies for control circuits





Type of power supply			Compact, 1-phase regulated switch mode (1) AUTO reset of automatic protection		llated switch mode natic protection
Input voltage		100240 V AC, 11022	20 V DC (compatible)	100240 V AC	
Output voltage	Output voltage         24 V DC         24 V DC         12 V		12 V DC	24 V DC	
Nominal Power / Current		15 W / 0.6 A	30 W / 1.2 A	22 W / 1.9 A 30 W / 1.3 A	
Certifications		cULus, TÜV	cULus, TÜV		
Conformity to standards	Safety	UL508, IEC/EN 60950	UL508, IEC/EN 60950		1131-2/A11
	EMC	EN 50081-2, EN 50082-2	2	EN 50081-2, IEC 61000-6-2 (EN 50082-2)	
Emission	Conducted and radiated	EN 55011, EN 55022 class A	EN 55011, EN 55022 cla	ss B	
Dimensions, W x D x H		45 x 95 x 75 mm	45 x 95 x 75 mm		
References		ABL7CEM24006	ABL7CEM24012	ABL7RM1202	ABL7RM2401

(1) Wide range.







Type of power supply		Universal, 1-phase regulated switch mode, wide range AUTO reset of automatic protection							
Input voltage	100240 V AC, 110230 V DC (version ABL7RP••)								
Output voltage	24 V DC								
Nominal Power / Current	48 W / 2 A	72 W / 3 A	120 W / 5 A		240 W / 10 A				
Certifications	UL, CSA, TÜV, Ctick								
Conformity to standards	Safety	IEC/EN 60950							
	EMC	EN 50081-2, IEC 61000-6-2 (EN 50082-2)							
	Low frequency harmonic currents	– EN 61000-3-2 – EN 6							
Emission	EN 55011, EN 55022 class B								
Dimensions, W x D x H	27 x 120 x 120 mm 54 x 120 x 12			nm	135 x 120 x 120	mm			
References	ABL7RE2402	ABL7RE2403	ABL7RE2405	<b>ABL7RP2405</b> (1)	ABL7RE2410	ABL7RP2410(1)			

(1) AUTO/MAN reset of automatic protection.



Type of power supply		Industrial, 2-phase regulated switch mode AUTO/MAN reset of automatic protection					
Input voltage		2 x 380415 V AC	2 x 380415 V AC				
Output voltage		24 V DC	24 V DC				
Nominal Power / Current		120 W / 5 A 240 W / 10 A					
Conformity to standards Safety		IEC/EN 60950					
	EMC	EN 50081-1, EN 50082-2					
	Low frequency harmonic currents	-					
Emission	Conducted and radiated	EN 55011, EN 55022 class B					
Dimensions, W x D x H		68 x 130 x 127 mm	68 x 154 x 127 mm				
References		ABL7REQ24050 ABL7REQ24100					

### **Power supplies for control circuits**







Type of power supply		Industrial, 3-phase regulated switch mode, wide range AUTO/MAN reset of automatic protection								
Input voltage		3 x 400520 V AC								
Output voltage		24 V DC	24 V DC							
Nominal Power / Current		120 W / 5 A	240 W / 10 A	480 W / 20 A	960 W / 40 A					
Certifications		cULus, c <b>جي</b> us								
Conformity to standards	Safety	IEC/EN 60950								
	EMC	EN 50081-1, EN 50082-2								
	Low frequency harmonic currents	-	EN61000-3-2							
Emission	Conducted and radiated	EN 55011, EN 55022 class B								
Dimensions, W x D x H		68 x 171 x 127 mm	nm 84 x 240 x 209 mm 106 x 275 x							
References		ABL7UES24050	ABL7UPS24100	ABL7UPS24200	ABL7UPS24400					



Type of power supply			Rectified and filtered									
Input voltage			215/230/245 or 385/400/415 V AC (±10%) 1-phase 380/400/420 V AC (±10%) 3-phase									
Output voltage			24 V DC									
Certifications			c <b>A</b> us									
Nominal power			24 W	60 W	120 W	240 W	360 W	480 W	240 W	480 W	720 W	960 W
Nominal current			1 A	2.5 A	5 A	10 A	15 A	20 A	10 A	20 A	30 A	40 A
Power supply references	1-phase	ABL6RF24•• (1)	01	02	05	10	15	20	_	-	-	-
	3-phase	ABL6RT24•• (1)	-	-	-	-	-	-	10	20	30	40

<sup>(1)</sup> Complete the reference according to the power and current using the adjacent table (example: ABL6RF2401).

#### **Transformers**



Type of transformer			Safety a	and isolat	ion						
Primary voltage			230/400 V	/ AC (±15%)	1-phase						
Secondary			Single or double winding (see references below)								
Certifications			RI.								
Nominal power			25 VA	40 VA	63 VA	100 VA	160 VA	250 VA	400 VA	630 VA	1000 VA
References, single winding ABL6TS•••(1)											
	Output voltage	12 V	02J	04J	06J	10J	16J	25J	-	-	_
		24 V	02B	04B	06B	10B	16B	25B	40B	63B	100B
		115 V	02G	04G	06G	10G	16G	25G	40G	63G	100G
		230 V	02U	04U	06U	10U	16U	25U	40U	63U	100U
References, double winding		<b>ABL6TD</b> •••(1)									
	Output voltage	24/48 V	02B	04B	06B	10B	16B	25B	40B	63B	100B
		115/230 V	02G	04G	06G	10G	16G	25G	40G	63G	100G

 $<sup>(1)</sup> Complete the reference according to the power and voltage using the table below (example: ABL6TS {\bf 02J}).$ 

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